Comparing Methodologies: National Health Accounts and Financial Sustainability Plans

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"Although self-sufficiency is the ultimate goal, in the nearer term, sustainable financing is the ability of a country to mobilize and efficiently use domestic and supplementary external resources on a reliable basis to achieve target levels of immunization performance in terms of access, utilization, quality, safety, and equity."

GAVI Financing Task Force definition of financial sustainability

Health systems worldwide, whether struggling to maintain services or expanding their capacity to improve the well-being of the populations they serve, must make critical resource allocation decisions to meet the costs of their objectives. Sound information on health sector costs and financing is needed in order to make policy on resource allocation, and then to judge if spending and financing policies indeed are achieving their intended goals. National Health Accounts (NHA) and Financial Sustainability Plans (FSPs) are two methodologies designed to capture expenditure and allocation pattern information (and the flow of funds from sources to uses) that can inform policy making and evaluation.

This paper examines the two methodologies: It first defines the methodologies, then does a point-by-point comparison of NHA and FSP at the conceptual, procedural, and methodological levels. This is done to elucidate differences and similarities, not to put the methods in competition with each other. The latter would be inappropriate, since the tools have different, though similar, objectives. The paper concludes with lessons from the NHA experience that could help to refine the FSP process.

Defining NHA and FSP

NHA is an internationally recognized tool for summarizing, describing, and analyzing the sources and uses of funds in national health systems – essential to better use of health financing information to improve national health system performance. NHA examines total health spending in a country – including public, private, and donor expenditures. In addition, NHA systematically tracks the flow of funds from one health care actor to another, such as distribution of funds from the ministry of health to health care providers. In short, NHA measures the "financial pulse" of the health system and answers the questions: Who pays for health care? How much do they spend? Through what mechanisms or intermediaries? On what type of services?

The Global Alliance on Vaccines and Immunization (GAVI) created the FSP concept for countries that receive limited-term assistance from the GAVI Vaccine Fund.[1] FSP scope thus is more focused than NHA's, examining resource requirements of a country's immunization program. FSPs also forecast expenditures (generally for an eight-year period) based on activities planned for the country's national immunization program (NIP). Additionally, FSPs examine efficiency of spending by calculating the cost per fully immunized child, cost per capita, and vaccine wastage rates. FSPs also examine shares of expenditures attributable to routine immunizations, campaigns, traditional vaccines, new/underused vaccines, safer injections, coverage changes, and population growth.

Understanding an immunization program's current financial status and future needs, and identifying and implementing a financing strategy that allows the program to achieve its goals are fundamental tasks in the planning and management of GAVI-assisted immunization programs. But it is clear that the FSP has the potential for broader application – for example, to non-beneficiary countries' immunization programs or even to other health programs.

The FSP answers four questions on financial resources that help a program achieve its objectives and contribute to the overall aims of the health sector: Where do the funds come from? How are the funds used? How much does it cost to achieve program objectives? How much funding is available now and in the future relative to what is required for program expansion and improvement (the "gap")? These issues influence the extent to which a program can achieve its objectives and contribute to broader health sector goals.

Comparing NHA and FSP

NHA and FSP are similar at the conceptual and procedural levels. Both are designed to inform health policy processes, including policy dialogue, design, and implementation, and the monitoring and evaluation of health care interventions. To date, the application of the two methodologies often, but not always, receives funding from international donors and is supported by external technical assistance. The two methodologies also implement their studies in similar ways in regard to preparation, capacity building, data collection and analysis, and reporting of results. Tables 1-3 compare these conceptual and procedural features.

NHA compiles expenditure data in tables that organize the flow of funds from the source of financing, passing through the institutions that manage the funds (financing agents), to the providers of services, the types of services delivered (functions), and the beneficiaries of those services. The functional breakdown includes services of curative care,

[1] GAVI provides vaccines and safe injection supplies to introduce hepatitis B, hib, and, sometimes, yellow fever vaccines into routine programs as well as cash support for overall immunization system strengthening. GAVI provides the assistance for a five- to seven-year period.

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ancillary services (e.g., clinical laboratory), medical goods such as drugs, prevention and public health services, and administration. For market providers, the economic value of transactions is estimated from the revenue side, at market prices. For non-market providers, the value of services is measured by the cost of resources that providers consume during the production process. To the extent possible, NHA tracks actual, and preferably audited, spending on production resources, only rarely calculating the amounts from input prices and quantities. An FSP produces a functional breakdown of expenditures on activities such as social mobilization; routine vaccination programs; supplementary immunization activities; and information, education, and communication activities. It estimates the expenditures on functions sometimes based on multiplying prices times quantities of inputs (vaccines, injection supplies) and in other cases using estimates of costs of whole activities (e.g., social mobilization campaigns, training programs).

At the methodological level, NHA and FSP differ in a number of ways. For example, FSPs do not track the flow of funds from original sources through intermediaries to final uses; rather, they concentrate on proximate sources and final uses. And, although FSPs have consistently reported efficiency indicators for NIPs, NHA has only begun to link national health expenditure information with efficiency indicators such as utilization rates and hospitalization rates. Table 4 enumerates the major methodological differences.

Table 1. Comparing Concepts of NHA and FSP Methodologies

National Health Accounts	Financial Sustainability Plan
NHA is a diagnostic tool designed to estimate health expenditures and track the flow of funds through the entire health sector. Baseline information is collected and policy implications drawn from results. NHA helps estimate key indicators such as: ▲ total health expenditure as a proportion of gross domestic product (GDP) ▲ total health expenditures per capita ▲ total pharmaceutical expenditures as proportion of health expenditure and/or GDP ▲ proportion of expenditures borne by donors, public sector, and households ▲ proportion of expenditures spent on prevention programs and curative care or outpatient and inpatient care	The FSP is a diagnostic tool to project expenditures of an immunization program. Baseline (pre-Vaccine Fund year) cost and financing information, context factors, and planned program improvements are assembled as the basis for the projections. An FSP produces key indicators such as: ▲ total program cost ▲ total immunization costs per capita ▲ total program cost as share of total government health spending ▲ total program cost as share of total government health spending plus total donor support ▲ total program cost as share of total government spending ▲ vaccine costs as share of total program costs ▲ cost per fully immunized child ▲ share of financing by government vis à vis external sources
NHA compiles expenditure data in tables that organize the flow of funds from the source of financing, passing through the institutions that manage the funds (financing agents), to the providers of services, the types of services delivered (functions), and the beneficiaries of those services. The functional breakdown includes services of curative care, ancillary services (e.g., clinical laboratory), medical goods such as drugs, prevention and public health services, and administration. For market providers, the economic value of transactions is estimated from the revenue side, at market prices. For non-market providers, the value of services is measured by the cost of resources that providers consume during the production process. To the extent possible, NHA tracks actual, and preferably audited, spending on production resources, only rarely calculating the amounts from input prices and quantities.	An FSP produces a functional breakdown of expenditures on activities such as social mobilization; routine vaccination programs; supplementary immunization activities; and information, education, and communication activities. It estimates the expenditures on functions sometimes based on multiplying prices times quantities of inputs (vaccines, injection supplies) and in other cases using estimates of costs of whole activities (e.g., social mobilization campaigns, training programs).

Table 2. Institutionalization, Capacity Building, and Networks

National Health Accounts	Financial Sustainability Plan
For NHA to be an effective policy monitoring and evaluation tool, it needs to be "institutionalized"; this includes a country conducting an NHA study at regular intervals.	Even though GAVI mandates the production of only one FSP per GAVI-supported country, the countries must submit annual progress reports. Reports estimate coverage rates attained, expenditures incurred, etc. and monitor progress against the FSP's strategic plan.
NHA emphasizes capacity building and ownership of the process and results on the part of local stakeholders.	The FSP process emphasizes capacity building and ownership of the process and results on the part of local stakeholders.
Several regional networks (East/Central/ Southern Africa, Europe/Central Asia, Latin America/Caribbean, Middle East/North Africa, West Africa) serve as fora for discussions among neighboring countries.	No formal networks exist, but regional working groups have been created to provide technical assistance and facilitate discussion among peer countries, and GAVI has organized FSP trainings on regional and linguistic bases.

Table 3. Comparing Implementation Procedures of NHA (initial round*) and FSP Methodologies

National Health Accounts	Financial Sustainability Plan
NHA initiates a study with a sensitization/orientation workshop for all stakeholders in-country.	GAVI organizes regional or language group orientation and training sessions for teams from countries that are embarking on FSP preparation. GAVI recommends that the teams organize orientation workshops for a broader group of stakeholders following their return home from the orientation and training sessions.
NHA establishes a steering committee to give overall guidance to NHA team and convey policy implications of results to policymakers.	A country's immunization interagency coordinating committee (ICC), which has a mandate similar to NHA steering committee, oversees FSP.
NHA establishes a technical team that represents all aspects of the health sector and is responsible for the technical work.	FSP technical teams comprise representatives from the NIP, ministries of health and finance, and, often, key donors.
NHA team receives training on methodology and process.	Training is recommended for FSP technical teams.
NHA team collects data from primary and secondary sources. Health care utilization and expenditure survey is essential for accurate NHA estimations.	FSP team gathers most data from secondary records. Household survey is not necessary. However, not having accurate population figures can create problems in future estimations.**
Team does data validation, analysis, and tabulation using standard format (NHA tables).	Team does data validation, analysis, and tabulation using standard format (FSP tables).
Team writes and disseminates report.	Team writes report using the recommended, but not required GAVI template. It must include comments from ICC members and signatures of ministers of health and finance.
Donors*** support NHA implementation worldwide.	Donor and lender partners*** support FSP implementation, including sitting on country ICCs and participating in the GAVI board.

* The description is "typical" of the way NHA is implemented for the first time in many countries. There is variation from country to country and subsequent rounds of NHA estimations skip the first step and may vary considerably in the others.
** For example, no census has been conducted since independence in Eritrea; therefore, population estimates vary significantly depending on the source. As a result, immunization rates and expenditures also vary widely by source. In Uganda and Ghana, new census data showed different birth cohort sizes and growth rates (bigger and higher for Uganda, smaller and lower for Ghana) that caused major changes in FSP projections.
*** NHA donors include U.S. Agency for International Development (USAID), World Bank, World Health Organization (WHO), Swedish International Development Cooperation Agency, and other bilateral donors. GAVI partners are UNICEF, Department for International Development (DfID), Gates' Children's Vaccine Program at PATH, Pan American Health Organization, World Bank, vaccine manufacturers, and many bilateral donors, including USAID.

Applying Lessons from the NHA Experience to FSP Methodology

NHA studies have been conducted frequently since the mid-1990s (whereas FSP work began in late 2002) and this experience has produced useful modifications to the methodology. Given the conceptual similarities between NHA and FSP, one modification may be especially applicable to FSPs.

As discussed above, FSP captures expenditures at two levels: sources and uses (NHA terminology). NHA uses these levels, plus an intermediary level, *financing agents*. A financing agent that has *programmatic control on how the funds are spent and is responsible for paying the provider (of care) for the health care services that are rendered*. That is, a financing source provides the funds for health care, but a financing agent manages those funds. This concept could be introduced into the FSP methodology. It would help the FSP team track funds more accurately, identify potential gaps in the flow, and reduce the possibility of double-counting.

The following four scenarios show how incorporating the concept of financing agents could enhance the accuracy and utility of FSPs:

- Donors provide government budgetary support that is earmarked for immunization and vaccination, but the ministry of finance (MOF) controls and manages the funds. This situation could result in misidentification of the source of funding – it could be mislabeled as coming from government whereas the true source is the international donor, and the MOF is the financing agent.
- A donor provides *basket funding* to a government. Even though some of the funding is intended for immunization and vaccination programs, the government (i.e., MOF) uses it for alternative purposes. If the FSP team were to rely only on donor numbers, it would over-estimate immunization expenditures. The intermediary step of cross-checking the amounts spent by the donor (as a source) and the MOF (as a financing agent) could reveal where the funding was not used for immunization.

Table 4: Methodological Comparison of NHA and FSP

National Health Accounts	Financial Sustainability Plan
NHA captures all health care expenditures in a given year, i.e., it is a retrospective study.	While an FSP estimates vaccination and immunization costs for two consecutive years (pre-Vaccine Fund and Vaccine Fund years), its focus is prospective: it primarily forecasts expenditures for the program objectives. An additional feature, specific to FSP, is a gap analysis, an assessment of the shortfall in funding given the program objectives.
All health sector expenditures are tracked at the following levels: Financing Sources, Financing Agents, Providers, and Functions.	FSP expenditures are tracked at only two levels: Sources (proximate) and Uses (functions). It does not distinguish between original funding sources and those that are agents/intermediaries. It does not distinguish different providers. In most of the low-income countries that are eligible for GAVI assistance, government providers dominate provision of immunizations, with a small role played by NGOs and commercial providers.
NHA includes a deliberate exercise that establishes time, geographic, and definition boundaries for health care expenditures (for example, accrual method using a specific fiscal year, attributing health expenditures to the place of residence of the person for whom they are made regardless of where they are made) and mandates a specific classification system for expenditures.	The FSP methodology includes a deliberate exercise that establishes time boundaries, geographic boundaries (only in-country costs), and definitions. However, there is no specific classification system like the International Classification of Health Accounts for NHA.
Household survey data is a necessary input for NHA estimations because a large proportion of the health care expenditures are borne by households.	Immunization and vaccination expenditures are largely incurred by donors and the public sector, not by individual households; therefore, a household survey is not warranted. Costs of transport time borne by households to obtain immunizations are not included in FSPs.
NHA studies have been conducted in 54 countries and a variant of NHA is conducted in 30 additional OECD countries. (NHA is appropriate for all countries.)	FSPs have been prepared in approximately 30 countries. (Only the countries eligible for GAVI support, approximately 72, will be required to produce FSPs.)
NHA tables include only capital expenditures reported by the government. If the government made an expenditure on a capital item during the fiscal year being studied, then the entire amount spent to purchase that item is included in the NHA tables. Thus, NHA does not estimate the cost of capital consumed in a given year.	FSPs break out capital from operating costs in pre-Vaccine Fund and Vaccine Fund year cost estimates and annualize capital costs. However, FSP resource requirement projections do not annualize capital costs because the focus is on cash needed for each year.
NHA covers the entire health sector so there is no reason to separate costs that are shared across programs, but this may be done in related analyses.	FSPs focus on immunization program costs, that is, those cost items for which the immunization program must mobilize funds in order to provide its specific services. Costs shared with other health services, such as multipurpose personnel, buildings, or transport, may be excluded or specifically apportioned to the immunization program.
WHO is the repository of many NHA data sets.	WHO maintains the Immunization Financing Database, where FSP data are compiled, analyzed, and made publicly available through a website (http://www.who.int/immunization.financing).
There is no external assessment of NHA reports because NHA is supposed to be an internal, country-driven process.	All GAVI countries submit their FSPs to an independent review committee (IRC) that judges their methodological soundness and completeness in describing and analyzing the financial sustainability situation and prospects. The IRC asks that some FSPs undergo minor or major revisions.

- In some countries, the central government provides funding to districts through block grants. In this case, the local government, rather than the NIP unit, is the financing agent. Such funding is often omitted from FSPs even though district money pays for immunization activities, especially outreach or social mobilization. This leads to an underestimation of immunization expenditures by the government.
- Often international donors, such as USAID, DfID, and World Bank, transfer funds to a procuring agency, such as UNICEF, which does the vaccine procurement for the recipient countries. This may result in the procuring agency being labeled the source of funds, whereas it is the financing agent.

In conclusion, tracking expenditures at the intermediary level of financing agent would improve the accuracy of FSP estimations, appropriately attribute the unique roles to each entity in immunization financing, and enhance the robustness of the FSP methodology.

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